## CLAIMS

39. (Amended) A semiconductor processing method of depositing $SiO_2$ on a substrate within a low pressure chemical vapor deposition reactor comprising feeding at least one of $H_2O$ and $H_2O_2$ into the low pressure chemical vapor deposition reactor while feeding an organic silicon precursor, the at least one of $H_2O$ and $H_2O_2$ being fed into the reactor separately from the organic silicon precursor, and comprising from about 5% to about 50% by volume of the material fed into the reactor, the at least one of $H_2O$ and $H_2O_2$ being added to the reactor in an absence of an external ozone source and being effective to reduce formation of undesired reaction intermediates of the organic silicon precursor which form at higher topographical elevations on the substrate than would otherwise occur without the feeding of the at least one of $H_2O$ and $H_2O_2$ into the reactor under otherwise identical depositing conditions.

[40. Cancelled]

41. The semiconductor processing method of claim 40, wherein the at least one of $H_2O$ and $H_2O_2$ comprises between about 5% to 15% by volume of material injected into the reactor.

42. The semiconductor processing method of Claim 39, wherein the organic silicon precursor is selected from the group consisting of: tetraethoxysilane (TEOS), diethylsilane (DES), tetramethylcyclo-tetrasiloxane (TMOTS), fluorotriethoxysilane (FTES), and fluorotrialkoxysilane (FTAS).

45. (Amended) The semiconductor processing method of Claim 39, wherein the chemical vapor deposition reactor is a hot wall reactor comprising an internal pressure from about 100 mTorr to about 3 Torr.

46. (Amended) The semiconductor processing method of Claim 39, wherein the chemical vapor deposition reactor is a cold wall reactor comprising an internal pressure from about 10 Torr to about 80 Torr.

47. (Amended) A semiconductor processing method of chemical vapor depositing $SiO_2$ on a substrate comprising:

placing a substrate within a low pressure chemical vapor deposition reactor;

feeding an organic silicon precursor into the low pressure chemical vapor deposition reactor having the substrate positioned therein under conditions effective to decompose the precursor into $SiO_2$ which deposits on the substrate and into a gaseous oxide of hydrogen; and

feeding an additional quantity of the gaseous oxide of hydrogen into the low pressure chemical vapor deposition reactor while feeding the organic silicon precursor into the reactor, the additional quantity comprising from about 5% to about 50% by volume of the material fed into the reactor, wherein the organic silicon precursor and the additional quantity of the gaseous oxide of hydrogen are fed into the reactor from separate feed streams in an absence of an external ozone source, the additional quantity of the gaseous oxide of hydrogen being effective to reduce formation of undesired reaction intermediates of the organic silicon precursor which form at higher topographical elevations on the substrate than would otherwise occur without the feeding of the additional quantity of the gaseous oxide of hydrogen into the reactor under otherwise identical depositing conditions.

48. (Amended) A semiconductor processing method of chemical vapor depositing $SiO_2$ on a substrate comprising:

placing a substrate within a hot-wall, low-pressure chemical vapor deposition reactor comprising an internal pressure from about 100 mTorr to about 3 Torr;

feeding an organic silicon precursor into the hot wall, low-pressure chemical vapor deposition reactor having the substrate positioned therein;

feeding an additional quantity of the gaseous oxide of hydrogen into the hot wall, low pressure chemical vapor deposition reactor while feeding the organic silicon precursor into the reactor, wherein the organic silicon precursor and the additional quantity of the gaseous oxide of hydrogen are fed into the reactor from separate feed streams, the additional quantity comprising from at least about 5% to about 50% by volume of the material fed into the reactor; and

providing conditions effective to decompose the precursor into $SiO_2$ at a theoretical decomposition rate, the additional quantity of gaseous oxide of hydrogen reducing the theoretical decomposition rate to a lower actual decomposition rate, the reducing a function of at least some of the additional quantity of gaseous oxide of hydrogen reducing formation of undesired reaction intermediates of the organic silicon precursor which form at higher topographical elevations on the substrate than would otherwise occur without the feeding of the at least one of $H_2O$ and $H_2O_2$ into the hot-wall, low-pressure chemical vapor deposition reactor under otherwise identical depositing conditions.

49. The semiconductor processing method of Claim 47, wherein the organic silicon precursor is selected from the group consisting of: tetraethoxysilane (TEOS), diethylsilane (DES), tetramethylcyclo-tetrasiloxane (TMCTS), fluorotriethoxysilane (FTES), and fluorotrialkoxysilane (FTAS).

50. (Amended) The semiconductor processing method of Claim 47, wherein the chemical vapor deposition reactor is a hot wall reactor comprising an internal pressure from about 100 mTorr to about 3 Torr.

51. (Amended) The semiconductor processing method of Claim 47, wherein the chemical vapor deposition reactor is a cold wall reactor comprising an internal pressure from about 10 Torr to about 80 Torr.

52. The semiconductor processing method of Claim 48, wherein the organic silicon precursor is selected from the group consisting of: tetraethoxysilane (TEOS), diethylsilane (DES), tetramethylcyclo-tetrasiloxane (TMCTS), fluorotriethoxysilane (FTES), and fluorotrialkoxysilane (FTAS).